

Craniofacial morphology by micro-CT

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 An abbreviated version of this protocol was published in eLIFE in Jun 2020

A non-mosaic transchromosomal mouse model of Down syndrome carrying the long arm of human chromosome 21

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Detailed protocol

Hi Shanrong,

Cranial images of TcMAC21 mice and their unaffected littermates were micro-CT (μ CT) scanned by the HD-600 OMNI-X scanner (Bio-Imaging Research Inc., Lincolnshire, IL; 100 kV, 0.19 mA) at the Center for Quantitative X-ray Imaging, Pennsylvania State University (www.cqi.psu.edu) at a resolution of 0.02mm (x, y, z axes). All the original image data were reconstructed on a 1024x1024 pixel grid and reduced from 16 bit TIFF to 8 bit TIFF for image analyses. Isosurfaces of each specimen in the sample were reconstructed using the software package AVIZO 9.4.0 (Visualization Sciences Group, VSG).

If you need additional details or want to know something specific, please feel free to e-mail me: nandini.singh@csus.edu

Best wishes,
Nandini

How to cite: (Readers should cite both the Bio-protocol preprint and the original research article where this protocol was used)

1. Singh, N. and Reeves, R. (2022). Craniofacial morphology by micro-CT. Bio-protocol Preprint. bio-protocol.org/prep1905.
2. Kazuki, Y., Gao, F. J., Li, Y., Moyer, A. J., Devenney, B., Hiramatsu, K., Miyagawa-Tomita, S., Abe, S., Kazuki, K., Kajitani, N., Uno, N., Takehara, S., Takiguchi, M., Yamakawa, M., Hasegawa, A., Shimizu, R., Matsukura, S., Noda, N., Ogonuki, N., Inoue, K., Matoba, S., Ogura, A., Florea, L. D., Savonenko, A., Xiao, M., Wu, D., Batista, D. A., Yang, J., Qiu, Z., Singh, N., Richtsmeier, J. T., Takeuchi, T., Oshimura, M. and Reeves, R. H. (2020). A non-mosaic transchromosomal mouse model of Down syndrome carrying the long arm of human chromosome 21. eLIFE. DOI: [10.7554/eLife.56223](https://doi.org/10.7554/eLife.56223)

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